



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200
Fax 613 632-5246

C45-13-1-PO
Job Sheet 182945



Part No: C45-13-1-PO

Job Qty: 40 ea

Part Name: Keeper Bushing



Part Weight: 0 lbs

Status: Scheduled

Priority: Medium

Job Created: 9/6/18

Job Tracking No:

Due Date: 11/1/18

Created By: Patrick Lussier

Type: Stock

Description:

Note: DWG C45-13-1 Rev. 4A IPP Rev. A 18.09.05 Now outsource DP Verify DD

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup hrs	Run Hrs	Workcenter / Supplier	Lead Time	
100	Purchasing	40 pcs		11/1/18	0.00	0.00	Purchasing		NOV 07 2018
110	Packaging	40 pcs		11/1/18	0.00	0.00	Packaging2		NOV 07 2018
120	QC	40 pcs		11/1/18	0.00	0.00	QC6		38
130	Packaging	40 pcs		11/1/18	0.00	0.00	Packaging3		9-88
140	QC21-FG	40 Ea		11/1/18	0.00	0.00	QC21		NOV 15 2018

Part Op 100 - Issue PO to P.J. MACHINAGE P/O 040952 MANUFACTURE C45-13-1 AS PER DWG -Certificate of Descriptions: conformity is required

SEPT 10, 2018 x 40 P. Lussier

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
C45-13-1P	Keeper Bushing	40 pcs (1 ea)	100-Purchasing	S125630

Job Allocations

Operation	Component Part	Required	Inventory	Allocated
100-Purchasing	C45-13-1P	40	0	0

Part Specifications

Specifications could not be found.

Plex 9/6/18 3:28 PM dart.Lussier.Patrick



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
CANADA
TEL : 1 613 632 - 5200
Email: sales@dartaero.com
www.dartaerospace.com

Container No: S125630



Part: C45-13-1

Job No: 182945

Serial No/Batch: S125630

Revision: 4A

Inspector:

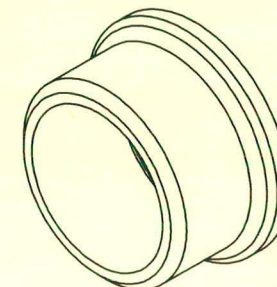
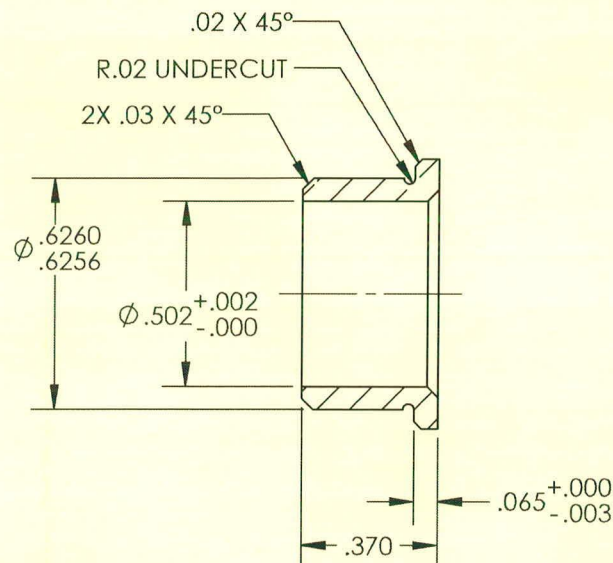
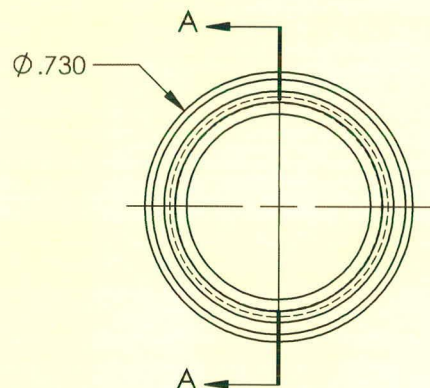
Exp Date:

Instructions:

Date: 11/07/18

This drawing, specifications, and concepts contained here in are the sole property of Dart Aerospace, and may not be reproduced or used in any fashion without the prior written permission of Dart Aerospace Eugene, OR.

REVISIONS					
REV	ECR	DESCRIPTION	DATE	INITIAL	APPROVED
3		AS DRAWN BY CANAM.	9/12/2012	RJC	
4		CH'D FROM Ø.624 +.001/-0.000 TO Ø.6260-.6256, HEAT TREAT FROM RC 45-48 TO RC 44-46.	6/18/2014	JAG	RJC
4A	14-0127	CH'D TITLE BLOCK WAS RED BARN IS DART. ADDED BAG & LABEL NOTE. CH'D TOLERANCE ON NON-CRITICAL DIMENSIONS.	8/14/2014	DPD	RW



SECTION A-A

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 180440 MLO
180706

NOTES:

1. NICKEL PLATE .0004 - .0006, BAKE AFTER PLATING.
2. BAG & LABEL WITH BATCH NUMBER.

DART AEROSPACE	
TITLE KEEPER BUSHING	
DWG NO. C45-13-1	REV 4A
MAT'L 4140	DRAWN BY: CANAM
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES	APPROVED <i>D Weil</i>
.XXX ± .005 FRACTIONS ± 1/8	HEAT TREAT RC 44-46
.XX ± .01 ANGLES ± 5°	FINISH SEE NOTE 1
.X ± .1	SPEC
1. BREAK ALL SHARP EDGES .015 x 45° OR .015R	USED ON MODEL
2. DIMENSIONAL LIMITS APPLY AFTER PLATING	
SCALE 2:1	DATE 5/15/1997
SHEET 1 OF 1	

ASSY QTY	ASSY QTY	B/O	Part #	UNIT QTY	Description	Material	B/O INFORMATION OR SPECIFICATIONS
			C45-13-1	1	KEEPER BUSHING	4140	Ø3/4 X 1/2

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="width:15%;">Skid-tube ☐</td> <td style="width:15%;">Cross tube ☐</td> <td style="width:15%;">Water Jet ☐</td> <td style="width:15%;">Engineering ☐</td> </tr> <tr> <td>Machining ☐</td> <td>Small Fab ☐</td> <td>Prod. Eng. Coord. ☐</td> <td>Quality ☐</td> </tr> <tr> <td>Thermoforming ☐</td> <td>Finishing ☐</td> <td>Rec/Store/Packaging ☐</td> <td>Other ☐</td> </tr> <tr> <td>Large Fab ☐</td> <td>Composite ☐</td> <td>Supplier ☐</td> <td></td> </tr> </table>						Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐																																																	
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Date :		Step #:		QTY Effective :			MRB (QSI042) Approval																																																																		
Description Work Order Deviation				Disposition				Completed By																																																																	
								Lead hand / Supervisor Approval Verification																																																																	
								QC / QA Coordinator Approval																																																																	
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Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER **PO040952**

Supplier: PJM001-VC
P.J. Machinage
1381 Rte Cite-Des-Jeunes
St-Lazare
QC
J7T 2B8
Phone: 450-455-0705

PO No: PO040952
PO Date: 9/10/18
Due Date: 11/5/18
Purchase Order
Revision:
Revision Date:
Ship-To Contact: Lussier, Patrick
Phone:

Ship To: 1270 Aberdeen Street
Hawkesbury
ON
K6A 1K7 Canada
Phone: 613-632-5200

Via: Ground
Pymt Terms: Net 30
Freight Terms:
Special Comments:

Revision

Items

Line Item	Job	Part	Supplier Part No	Item No	Description	Status	Account	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
1	182940	C10-10-1P			Actuator Shaft	Firmed -		11/5/18	26 pcs	0 pcs	26 pcs	\$64.60/pcs	\$1,679.60
2	182941	C10-9-4P			Latch Shaft Bushing	Firmed -		11/5/18	55 pcs	0 pcs	55 pcs	\$18.77/pcs	\$1,032.35
4	182943	C10-8P			Trunnion Bushing	Firmed -		11/5/18	42 pcs	0 pcs	42 pcs	\$22.80/pcs	\$957.60
5	182944	C45-4-2P			Trunnion, Load Beam	Firmed -		11/5/18	25 Ea	0 Ea	25 Ea	\$56.53/Ea	\$1,413.25
6	182945	C45-13-1P			Keeper Bushing	Firmed -		11/5/18	44 pcs	0 pcs	44 pcs	\$20.90/pcs	\$919.60
8	182947	C2-3-3P			Latch Roller	Firmed -		11/5/18	55 Ea	0 Ea	55 Ea	\$19.95/Ea	\$1,097.25
9	182948	C3-12-4P			Lock Roller	Firmed -		11/5/18	62 pcs	0 pcs	62 pcs	\$18.86/pcs	\$1,169.32
10	182949	C3-3-7P			Link	Firmed -		11/5/18	51 pcs	0 pcs	51 pcs	\$23.90/pcs	\$1,218.90
11	182950	PC250-775P			Lever Arm Bushing	Firmed -		11/5/18	18 pcs	0 pcs	18 pcs	\$77.90/pcs	\$1,402.20
												Grand Total:	\$10,890.07

DAS
38
9-09



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER PO040952

Order Notes

Procurement Quality Clauses

A005 RIGHT OF ENTRY

A008 FIRST ARTICLE INSPECTION (FAI) BY SELLER, (DOCUMENTATION SENT TO DART AEROSPACE)

A012 CHEMICAL AND PHYSICAL TEST REPORTS

A016 PERSONNEL QUALIFICATION

A017 RAW MATERIAL IDENTIFICATION (AS APPLICABLE)

A026 CERTIFICATION OF MATERIAL CONFORMANCE

A041 QUALITY MANAGEMENT SYSTEM

A042 DART NOTIFICATION BY SUPPLIER

A043 RETENTION OF QUALITY DOCUMENT

A048 COUNTERFEIT PARTS AVOIDANCE, DETECTION, MITIGATION AND DISPOSITION PROGRAM

A049 SUPPLIER AWARENESS

Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit www.dartaerospace.com for further explanation.

A handwritten signature in black ink, appearing to be "RL" or similar, located to the right of the terms and conditions text.

Plex 11/1/18 9:06 AM dart.Lussier.Patrick

Shipping Order

31/10/2018

P.J. Machinage (9052 9470 Qc Inc).
1381, Rte Cité-Des-Jeunes,
St-Lazare, Qc
J7T 2B8

Tel. : 450 455-0705

Order : 24094
Reference : PO040952-S/O : 7029
Bid : 15074
Ship : Votre camion

Customer : 628

Ship To

Dart Aerospace Ltd.
Accounts payable
1270 Aberdeen St
Hawkesbury, Ontario
K6A 1K7

Same

Fax: 1 613 632-5246

Item No.	Description	Qty	Qty. Delivere	B/O Qty
001	C45-4-2 Rev. 20 Trunnion Load Beam (J-7029-A)	25	<u>25</u>	<u>Ø</u>
002	C10-10-1 Rev. 3A Actuator Shaft (J-7029-B)	26	<u>26</u>	<u>Ø</u>
003	C45-13-1 Rev. 4A Keeper Bushing (J-7029-C)	44	<u>44</u>	<u>Ø</u>
004	C10-9-4 Rev. 2A Latch Shaft Bushing (J-7029-D)	55	<u>55</u>	<u>Ø</u>
006	C2-3-3 Rev. 4A Latch Roller (J-7029-F)	55	<u>55</u>	<u>Ø</u>
008	C3-12-4 Rev. 1A Lock Roller (J-7029-H)	62	<u>62</u>	<u>Ø</u>
009	C3-3-7 Rev. 4A Link (J-7029-I)	51	<u>51</u>	<u>Ø</u>
010	PC250-775 Rev. 1A (J-7029-J)	18	<u>18</u>	<u>Ø</u>
012	C10-8 Rev. 1A Trunnion Bushing (J-7029-L)	42	<u>42</u>	<u>Ø</u>

DAS
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P.J. Machinage retains ownership of all goods sold and other work-product delivered to or performed for its customer until full and complete payment of the underlying invoice, even in circumstances where the part to be machined or materials were provided by the customer. In cases where the part of materials belonged to the customer before it is remitted to P.J. Machinage for the purpose of performing work thereon, its delivery to P.J. Machinage shall entail a transfer of the underlying rights of ownership of the customer over said part or materials.

Shipping : Votre Camion - Dicom Ref. : D11 311 285
Package No : 06/11/2018
Merchandise Received: 06/11/2018

PJ Machinage**Certificate of conformance****Sold to:**

Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON, K6A 1K7

Supplier address:

PJ Machinage
1381 Route Cité-Des-Jeunes
St-Lazare, Qc, J7T 2B8

Purchase Order: PO040952

This is to certify that the below names items were inspected and/or tested to your drawings, specifications and purchase order. Objective evidence are shipped with the products and are on file to support the verifications and/or tests and can be made available on request, unless otherwise noted.

<u>Part Number</u>	<u>Quantity</u>	<u>Description</u>
C-45-4-2 Rev. 20	25	<u>Trunnion Load Beam</u>
C10-10-1 Rev. 3A	26	<u>Actuator Shaft</u>
C45-13-1 Rev. 4A	44	<u>Keeper Bushing</u>
C10-9-4 Rev. 2A	55	<u>Latch Shaft</u>
C2-3-3 Rev. 4A	55	<u>Latch roller</u>
C3-12-4 Rev. 1A	62	<u>Lock roller</u>
C3-3-7 Rev. 4A	51	<u>Link</u>
PC250-775 Rev. 1A	18	
C10-8 Rev. 1A	42	<u>Trunnion Bushing</u>



, October 30 , 2018



Certificat de Conformité / Certificate of Compliance

(013850-1)

2455, Rue Halpern | Saint-Laurent | Québec | H4S 1N9
 Tel: 514-335-3666 Fax: 514-335-3868
 www.groupaltech.com

Bon de Livraison / Packing Slip

013850 - 1

Livré à / Ship to

PJ MACHINAGE

1381 Rte de la Cité-des-Jeunes

St-Lazare, QC, J7T2B8

CANADA

Tel.: 450-455-0705 Fax.: 450-455-1167

Client / Customer:

PJ MACHINAGE

1381 Rte de la Cité-des-Jeunes

St-Lazare, QC, J7T2B8

CANADA

BUYER:

Date expédition Ship date		Créé Par Generated By		Transport / No de Compte Courier / Acc. No.		Bon de commande Client Customer Purchase Order No.			
29-Oct-2018		Aman				135493			
#Ligne Line#	No. de Série / # Pièce Part Number /Line Item Details Job # / Ref #	Description pièce(s)	CATG. U/M	Comm. /Ordered	Exp/ Shipped	Qté NC/ NC Qty	Qté Scrap/	À venir/ Back Order	
1	C10-10-1 Rev.	C10-10-1 01 -E-NIC STEEL 200 [E-NICKEL STEEL 200] QQ-N-290 CLASS 2 ,GRADE E ,0.0004"-0.0006" THICK BAKE AFTER PLATING	E-NICKEL STEEL CH	26	26	0	0	0	
2	C45-13-1 Rev.	C45-13-1 01 -E-NIC STEEL 200 [E-NICKEL STEEL 200] QQ-N-290 CLASS, 2 GRADE E , 0.0004"-0.0006" THICK BAKE AFTER PLATING	E-NICKEL STEEL CH	44	44	0	0	0	
3	C10-9-4 Rev.	C10-9-4 01 -E-NIC STEEL 200 [E-NICKEL STEEL 200] QQ-N-290 CLASS 2 ,GRADE ,0.0004"-0.0006" THICK BAKE AFTER PLATING	E-NICKEL STEEL CH	55	55	0	0	0	
4	C2-3-3 Rev.	C2-3-3 01 -E-NIC STEEL 200 [E-NICKEL STEEL 200] QQ-N-290 CLASS 2 , GRADE E,0.0004-0.0006 THICK BAKE AFTER PLATING	E-NICKEL-200 CH	55	55	0	0	0	
5	C3-12-4 Rev.	C3-12-4 01 -E-NIC STEEL 200 [E-NICKEL STEEL 200] QQ-N-290 ,CLASS 2 , GRADE E, 0.0004"-0.0006"THICK BAKE AFTER PLATING	E-NICKEL STEEL CH	62	62	0	0	0	
6	C3-3-7 Rev.	C3-3-7 01 -E-NIC STEEL 200 [E-NICKEL STEEL 200] QQ-N-290 ,CLASS 2 , GRADE E, 0.0004"-0.0006"THICK BAKE AFTER PLATING	E-NICKEL STEEL CH	51	51	0	0	0	
7	PC250-775 Rev.	PC250-775 01 -E-NIC STEEL 200 [E-NICKEL STEEL 200] QQ-N-290 ,CLASS 2 , GRADE E , 0.0004"- 0.0006" THICK BAKE AFTER PLATING	E-NICKEL-200 CH	18	18	0	0	0	
8	C10-8 Rev.	C10-8 01 -E-NIC STEEL 200 [E-NICKEL STEEL 200] QQ-N-290 ,CLASS 2 GRADE E 0.0004"-0.0006"THICK BAKE AFTER PLATING	E-NICKEL-200 CH	42	42	0	0	0	

Notes Additionnelles / Additional Notes

Epaisseur réelle
Actual Thickness

Inspecteur Qualité
Quality Inspector

Réçu par
Received By

Nous certifions que les pièces énumérées ci-dessus ont été traitées en conformité avec votre commande et vos spécifications et rencontrent les exigences.
 Notre responsabilité financière et légale ne sera pas supérieure au montant de la facture issue.

We hereby certify that the parts listed above have been process in accordance with your purchase order and specifications and are in conformance with your requirements.
 Our financial and legal responsibility will not be higher than the amount of invoice.

QUANTITÉ:

25



CYT-4 PA / CYT-4-PA

PAGE No.:

001

NOM DE LA PIÈCE:

MATÉRIEL:

4140 ANN

OBSERVATION:

SIGNATURE RESPONSABLE:

Prabhu

CERTIFICATE OF TEST
CERTIFICAT D'ESSAIS

7029-A

445

Page 02 of 02

Certification Date

CUSTOMER ORDER NUMBER

NUMÉRO DE COMMANDE DU CLIENT

18993

PART NUMBER/NUMÉRO DE PIÈCE

Invoice Number
S203244

SOLD TO: ACIER ANICA STEEL INC.
VENDU À:

2082 AVE CHARTIER
DORVAL PQ H9P 1H2

SHIP TO:
EXPÉDIÉ À:

ACIER ANICA STEEL INC.

2082 AVENUE CHARTIER
DORVAL PQ H9P 1H2

Description: 4140/4142 HR ANN BAR ASTM A322
1-1/4 RD X 20' R/L

Line Total: 99 LB

HEAT: 4809312

ITEM: 506260

END-QUENCH HARDENABILITY (JOMINY - RC) IN

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
58	56	56	55	55	55	55	55	54	53	52	51	50	48	47
16	18	20	22	24	26	28	30	32						
46	44	43	42	40	40	39	36	36						

RAIN SIZE :7 -

STRAND CAST REDUCTION RATIO 37.2 TO 1
MATERIAL IS FREE FROM MERCURY CONTAMINATION
NO WELD REPAIR PERFORMED ON MATERIAL

COMMENTS

melt source rti -franklin
melt country usa
hot roll srce rti lackawanna
hot roll country usa
melt method strand cast

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The willful recording of false, fictitious, or fraudulent statements in connection with test results is punishable as a felony under federal statutes. /Les informations fausses, fictives ou en rapport avec le résultat des essais sont punissables en vertu des lois fédérales.

Material did not come in contact with mercury while in our possession. /Par les présentes, nous certifions que le matériel couvert par ce rapport rencontre les spécifications décrites ci-haut.

NIL BROCHU

Nil Brochu

MANAGER, QUALITY ASSURANCE
GERANT DE L'ASSURANCE QUALITÉ

CERTIFICATE OF TEST
CERTIFICAT D'ESSAIS

- 7029-A

C-465

Page 01 of 02

Certification Date

CUSTOMER ORDER NUMBER
NUMÉRO DE COMMANDE DU CLIENT

18993

PART NUMBER/NUMÉRO DE PIÈCE

Invoice Number
S203244

SOLD TO: ACIER ANICA STEEL INC.
VENDU À:

2082 AVE CHARTIER
DORVAL PQ H9P 1H2

SHIP TO:
EXPÉDIÉ À:

ACIER ANICA STEEL INC.

2082 AVENUE CHARTIER
DORVAL PQ H9P 1H2

Description: 4140/4142 HR ANN BAR ASTM A322
1-1/4 RD X 20' R/L
HEAT: 4809312

ITEM: 506260

Line Total: 99 LB

Specifications:

ASTM A322 91

ASTM A304 96

ASTM E 327

ASTM E 1086

ASTM E 415

ASTM E 1019

ASTM E 1085

ASTM E 572

CHEMICAL ANALYSIS

C	V	MN	N	P	CB	S	SN
.41	0.011	0.86	0.0067	0.018	0.004	0.012	0.009
SI	CU	NI	CR	MO	AL		
0.23	0.2	0.19	0.96	0.2	0.024		

RCPT: R841307

MILL: REPUBLIC TECHNOLOGIES INT'L

COUNTRY OF ORIGIN: USA

MECHANICAL PROPERTIES

DESCRIPTION	YLD STR	ULT TEN	%ELONG	%RED IN AREA	HARDNESS BHN 178
-------------	---------	---------	--------	-----------------	------------------------

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NIL BROCHU

Nil Brochu

MANAGER, QUALITY ASSURANCE
GERANT DE L'ASSURANCE QUALITÉ

METCOR INC.

560 BOUL. ARTHUR-SAUVÉ, ST-EUSTACHE, QC, J7R 5A8

Tél.: 450-473-1884

Télécopieur / Fax administration: 450-491-5498

Télécopieur / Fax production: 450 491-6454

Certificat de Conformité Certificate of Compliance

BON DE TRAVAIL order	CHARGEMENT load
331140	1

CLIENT / customer 238

P.J. MACHINAGE

1381 ROUTE LA CITÉ DES JEUNES

ST-LAZARRE

QC J7T 2B8

LIVRÉ À / shipped to:

P.J. MACHINAGE

1381 ROUTE LA CITÉ DES JEUNES

ST-LAZARRE

QC J7T 2B8

1

COMMANDE DU CLIENT customer po	CLASSIFICATION PIECE part classification	MATÉRIEL material	MAÎTRE D'OEUVRE prime contractor	PROGRAM
135401	N/A	4140		

SPÉCIFICATIONS DU PROCÉDÉ processing specifications

SEL HARDEN

HARDEN AND TEMPER

EXIGENCE / requirement	SPÉCIFICATIONS / specified	TESTS EXÉCUTÉS / performed	RÉSULTATS DE TESTS / results
HARDNESS	42 - 46 HRC	11 (907)	45 - 46 HRC

QUANTITÉ quantity	POIDS weight	DESCRIPTION DES PIÈCES parts description
120	36	PIECES (87) PIECES 2 BOITE DE CARTON

COMMENTAIRES / comments

22 OCT

APPROUVÉ par / Approved by:

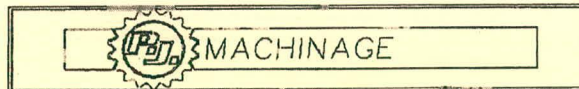
DATE: 2018-10-20

Pierre Piché
Chief Inspector



APPROUVÉ

CLIENT: 628
 JOB No.: 7029-B
 PLAN No.:
 P.O.: 040952
 QUANTITÉ: 26



DATE: 25-09-2018
 FORMAT No.: 001
 PAGE No.:

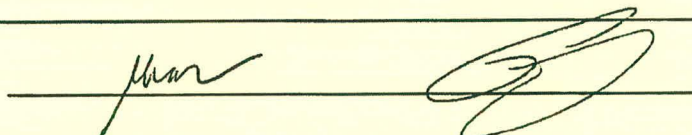
CONTRÔLE DE QUALITÉ

NOM DE LA PIÈCE: C10-10-1 Rev. 3A, Actuator Shaft MATÉRIEL: 4140 ANN

DIMENSIONS DE DESSIN ET TOLERANCE								
PIÈCE No.	$\phi 0.622^{+0.0}_{-0.002}$	$\phi 0.622^{+0.0}_{-0.002}$	0.58	0.96	3.19	0.125	$\phi 0.386$	
DIMENSIONS DE LA PIÈCE								
	$\phi 0.621$	$\phi 0.621$	0.58	0.96	3.193	0.127	$\phi 0.387$	
	$\phi 0.621$	$\phi 0.621$	0.58	0.96	3.193	0.127	$\phi 0.387$	
	$\phi 0.621$	$\phi 0.621$	0.58	0.96	3.194	0.126	$\phi 0.387$	
	$\phi 0.621$	$\phi 0.621$	0.58	0.96	3.192	0.127	$\phi 0.387$	
	$\phi 0.621$	$\phi 0.621$	0.58	0.96	3.192	0.127	$\phi 0.387$	
	6205	620	580	960	3.193	127	387	
	621	621	580	960	3.193	127	387	

OBSERVATION:

SIGNATURE RESPONSABLE:



7029-B

463

CERTIFICATE OF COMPLIANCE / CERTIFICAT DE CONFORMITÉ

Order No. / No. Commande 33929	CUSTOMER / CLIENT ACIER ANICA LTÉE ATT: FRANCOIS	Packing slip / No. d'expédition U95859-01	DATE 18/02/2006
MATERIAL ID# / No. MATÉRIEL 2007-2311	GRADE / NUANCE AISI 4140	HEAT TREATMENT / TRAITEMENT THERMIQUE ANNEALED / RECUIT ADOUCI	HEAT / COUÉE M25200
SHAPE / FORME Round / Rond	SIZE / DIMENSION 1.000 in.	SPECIFICATIONS ASTM A322-06	

CHEMICAL COMPOSITION / ANALYSE CHIMIQUE

	Carbon (C)		Silicon (Si)		Manganese (Mn)		Phosphorus (P)	
mini/maxi	0.380	0.430	0.150	0.350	0.750	1.000	0.035	
actuel (%):	0.410		0.240		0.880		0.018	
	Sulfur (S)		Chromium (Cr)		Nickel (Ni)		Molybdenum (Mo)	
mini/maxi	0.040		0.800	1.100	0.000	0.250	0.150	0.250
actuel (%):	0.031		0.940		0.130		0.160	
	Copper (Cu)		Vanadium (V)		Aluminium (Al)		Tungsten (T)	
mini/maxi	0.350		—		—		—	
actuel (%):	0.220		0.006		0.029			

MECHANICAL PROPERTIES / PROPRIÉTÉS MÉCANIQUES

Yield strength / Élasticité	Tensile / résistance à la traction	Elongation / allongement (%)	Reduction of area / surface (%)	surface hd / dureté
PSI	PSI			201/207 BHN

TESTS JOMINY / JOMINY RESULTS

J	HRC	J	HRC	J	HRC	J	HRC
01	54	07	54	13	45	22	39
02	54	08	53	14	45	24	39
03	54	09	52	15	44	26	36
04	55	10	51	16	42	28	37
05	54	11	49	18	41	30	36
06	54	12	47	20	40	32	36

No weld repairs performed during the manufacturing of this product. We hereby certify that the product conforms to the above mentioned specifications.

Aucune réparation exécutée par soudure durant la fabrication de ce produit. Par la présente nous attestons que les résultats ci-dessus mentionnés ont été vérifiés et sont conformes aux spécifications.

Rossine Keckert
Keith BALL

METCOR INC.

660 BOUL. ARTHUR-SAUVÉ, ST-EUSTACHE, QC, J7R 5A8

Tél.: 450-473-1884

Télécopieur / Fax administration: 450-491-5498

Télécopieur / Fax production: 450 491-6454

Certificat de Conformité Certificate of Compliance

BON DE TRAVAIL order	CHARGEMENT load
331137	1

CLIENT / customer 238

P.J. MACHINAGE

1381 ROUTE LA CITÉ DES JEUNES

ST-LAZARRE

QC J7T 2B8

LIVRÉ À / shipped to:

P.J. MACHINAGE

1381 ROUTE LA CITÉ DES JEUNES

ST-LAZARRE

QC J7T 2B8

1

COMMANDE DU CLIENT customer po	CLASSIFICATION PIECE part classification	MATÉRIEL material	MAÎTRE D'OEUVRE prime contractor	PROGRAM
135383	N/A	4140		
SPECIFICATIONS DU PROCÉDÉ processing specifications				
SEL HARDEN				
HARDEN AND TEMPER				
EXIGENCE / requirement	SPECIFICATIONS / specified	TESTS EXÉCUTÉS / performed	RÉSULTATS DE TESTS / results	
HARDNESS	37 - 40 HRC	11	38 - 40 HRC	
(807)				
QUANTITÉ quantity	POIDS weight	DESCRIPTION DES PIÈCES parts description		
123	17	PIECES (123) PIECES		
		1 BOITE DE CARTON		

COMMENTAIRES / comments

20 OCT

APPROUVÉ par / Approved by:

DATE: 2018-10-20

Pierre Piché
Chief Inspector



APPROUVÉ

QUANTITÉ:

62B
629-C
C45.13.1. Rev. 4 A
040952
44 NOM DE



Keeper Bushing

MATÉRIEL:

PAGE No.:

31/10/18

4140 ANN

[illegible]

OBSERVATION:

SIGNATURE RESPONSABLE:

CERTIFICATE OF TEST CERTIFICAT D'ESSAIS

7029-C

Page 01 of 02

Certification Date

CUSTOMER ORDER NUMBER
NUMÉRO DE COMMANDE DU CLIENT

25398

Invoice Number
S307890

PART NUMBER/NUMÉRO DE PIÈCE

SOLD TO: ACIER ANICA STEEL INC.
VENDU À: 540 AVENUE FIRING
BAIE D'URFE PQ H9X 3T2

SHIP TO: ACIER ANICA STEEL INC.
EXPÉDIÉ À: 540 AVENUE FIRING
BAIE D'URFE PQ H9X 3T2

Description: 4140/4142 HR ANN BAR ASTM A322
3/4 RD X 20' R/L
HEAT: M89114

Line Total: 301 LB

ITEM: 506256

Specifications:
ASTM A322 91 ASTM A304 96

CHEMICAL ANALYSIS

C	MN	P	S	SI	CU	NI	CR
0.4	0.84	0.014	0.02	0.27	0.11	0.08	0.97
MO	SN	AL	V	CB	TI	B	CA
0.16	0.008	0.023	0.005	0.002	0.003	0.0	0.0006
ZR	N	CO	ZN	PB			
0.001	0.0	0.006	0.0029	0.0			

RCPT: R505082
MILL: NORTH STAR STEEL

COUNTRY OF ORIGIN: USA

MECHANICAL PROPERTIES

DESCRIPTION	YLD STR	ULT TEN	%ELONG	%RED IN AREA	HARDNESS BHN 183
-------------	---------	---------	--------	-----------------	------------------------

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Material did not come in contact with mercury while in our possession. /Par les présentes, nous certifions que le matériel couvert par ce rapport rencontre les spécifications décrites ci-haut.

NIL BROCHU

Nil Brochu

MANAGER, QUALITY ASSURANCE
GERANT DE L'ASSURANCE QUALITÉ

METCOR INC.

560 BOUL. ARTHUR-SAUVÉ, ST-EUSTACHE, QC, J7R 5A8

Tél.: 450-473-1884

Télécopieur / Fax administration: 450-491-5498

Télécopieur / Fax production: 450 491-6454

Certificat de Conformité Certificate of Compliance

BON DE TRAVAIL order	CHARGEMENT load
331140	1

CLIENT / customer 238

P.J. MACHINAGE

1381 ROUTE LA CITÉ DES JEUNES

ST-LAZARRE

QC J7T 2B8

LIVRÉ À / shipped to:

P.J. MACHINAGE

1381 ROUTE LA CITÉ DES JEUNES

ST-LAZARRE

QC J7T 2B8

1

COMMANDE DU CLIENT customer po	CLASSIFICATION PIECE part classification	MATÉRIEL material	MAÎTRE D'OEUVRE prime contractor	PROGRAM
135401	N/A	4140		

SPÉCIFICATIONS DU PROCÉDÉ processing specifications

SEL HARDEN

HARDEN AND TEMPER

EXIGENCE / requirement	SPÉCIFICATIONS / specified	TESTS EXÉCUTÉS / performed	RÉSULTATS DE TESTS / results
HARDNESS	42 - 46 HRC	11	45 - 46 HRC
		(907)	

QUANTITÉ quantity	POIDS weight	DESCRIPTION DES PIÈCES parts description
120	36	PIECES (87) PIECES 2 BOITE DE CARTON

COMMENTAIRES / comments

22 OCT

APPROUVÉ par / Approved by:

DATE: 2018-10-20

Pierre Piché
Chief Inspector



APPROUVÉ

4140 ANN

MACHINE

Latch shaft

SIGNATURE RESPONSABLE:

CERTIFICATE OF TEST
CERTIFICAT D'ESSAIS

7029-D

C-465

Page 01 of 02

Certification Date

CUSTOMER ORDER NUMBER
NUMÉRO DE COMMANDE DU CLIENT

18993

PART NUMBER/NUMÉRO DE PIÈCE

Invoice Number
S203244

SOLD TO: ACIER ANICA STEEL INC.
VENDU À: 2082 AVE CHARTIER
DORVAL PQ H9P 1H2

SHIP TO:
EXPÉDIÉ À:

ACIER ANICA STEEL INC.
2082 AVENUE CHARTIER
DORVAL PQ H9P 1H2

Description: 4140/4142 HR ANN BAR ASTM A322
1-1/4 RD X 20' R/L
HEAT: 4809312

ITEM: 506260

Line Total: 99 LB

Specifications:

ASTM A322 91
ASTM E 1086
ASTM E 1085

ASTM A304 96
ASTM E 415
ASTM E 572

ASTM E 327
ASTM E 1019

CHEMICAL ANALYSIS

C	V	MN	N	P	CB	S	SN
.41	0.011	0.86	0.0067	0.018	0.004	0.012	0.009
SI	CU	NI	CR	MO	AL		
0.23	0.2	0.19	0.96	0.2	0.024		

RCPT: R841307

MILL : REPUBLIC TECHNOLOGIES INT'L

COUNTRY OF ORIGIN : USA

MECHANICAL PROPERTIES

DESCRIPTION	YLD STR	ULT TEN	%ELONG	%RED IN AREA	HARDNESS BHN 178
-------------	---------	---------	--------	-----------------	------------------------

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Material did not come in contact with mercury while in our possession. /Par les présentes, nous certifions que le matériel couvert par ce rapport rencontre les spécifications décrites ci-haut.

NIL BROCHU

Nil Brochu

MANAGER, QUALITY ASSURANCE
GERANT DE L'ASSURANCE QUALITE

CERTIFICATE OF TEST
CERTIFICAT D'ESSAIS

445

7029-D

Page 02 of 02
Certification Date

CUSTOMER ORDER NUMBER
NUMÉRO DE COMMANDE DU CLIENT

18993

PART NUMBER/NUMÉRO DE PIÈCE

Invoice Number
S203244

SOLD TO: ACIER ANICA STEEL INC.
VENDU À:

2082 AVE CHARTIER
DORVAL PQ H9P 1H2

SHIP TO:
EXPÉDIÉ À:

ACIER ANICA STEEL INC.

2082 AVENUE CHARTIER
DORVAL PQ H9P 1H2

Description: 4140/4142 HR ANN BAR ASTM A322
1-1/4 RD X 20' R/L

Line Total: 99 LB

HEAT: 4809312

ITEM: 506260

END-QUENCH HARDENABILITY (JOMINY - RC) IN

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
58	56	56	55	55	55	55	55	54	53	52	51	50	48	47
16	18	20	22	24	26	28	30	32						
46	44	43	42	40	40	39	36	36						

RAIN SIZE :7 -

STRAND CAST REDUCTION RATIO 37.2 TO 1
MATERIAL IS FREE FROM MERCURY CONTAMINATION
NO WELD REPAIR PERFORMED ON MATERIAL

COMMENTS

melt source rti -franklin
melt country usa
hot roll srce rti lackawanna
hot roll country usa
melt method strand cast

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NIL BROCHU

Nil Brochu

MANAGER, QUALITY ASSURANCE
GERANT DE L'ASSURANCE QUALITÉ

METCOR INC.

560 BOUL. ARTHUR-SAUVÉ, ST-EUSTACHE, QC, J7R 5A8

Tél.: 450-473-1884

Télécopieur / Fax administration: 450-491-5498

Télécopieur / Fax production: 450 491-6454

7029-D

Certificat de Conformité Certificate of Compliance

BON DE TRAVAIL order	CHARGEMENT load
331137	1

CLIENT / customer 238

P.J. MACHINAGE

1381 ROUTE LA CITÉ DES JEUNES

ST-LAZARRE

QC J7T 2B8

LIVRÉ À / shipped to:

P.J. MACHINAGE

1381 ROUTE LA CITÉ DES JEUNES

ST-LAZARRE

QC J7T 2B8

1

COMMANDE DU CLIENT customer po	CLASSIFICATION PIECE part classification	MATÉRIEL material	MAÎTRE D'OEUVRE prime contractor	PROGRAM
135393	N/A	4140		

SPÉCIFICATIONS DU PROCÉDÉ

processing specifications

SEL HARDEN

HARDEN AND TEMPER

EXIGENCE / requirement	SPÉCIFICATIONS / specified	TESTS EXÉCUTÉS / performed	RÉSULTATS DE TESTS / results
HARDNESS	37 - 40 HRC	11 (907)	38 - 40 HRC

QUANTITÉ quantity	POIDS weight	DESCRIPTION DES PIÈCES parts description
123	17	PIECES (123) PIECES 1 BOITE DE CARTON

COMMENTAIRES / comments

2 Oct

APPROUVÉ par / Approved by:

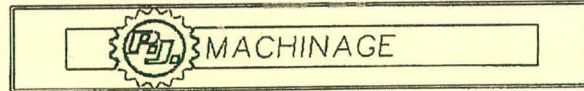
DATE: 2018-10-20

Pierre Piché
Chief Inspector



APPROUVÉ

CLIENT: 628
JOB No.: 7029-F
PLAN No.:
P.O.: 040952
QUANTITÉ: 55



DATE: 24-10-2016
FORMAT No.: 001
PAGE No.:

CONTRÔLE DE QUALITÉ

NOM DE LA PIÈCE:

02-7-3 Mv. 4A Latch roller

MATÉRIEL:

4140 ANN

DIMENSIONS DE DESSIN ET TOLERANCE									
PIÈCE No.	<u>Ø 017753 ~</u>	<u>Ø 0.7743</u>		<u>Ø 6815</u>	<u>265</u>	<u>240</u>			
DIMENSIONS DE LA PIÈCE									
	<u>Ø 017755</u>								
	<u>Ø 0.7755</u>								
	<u>Ø 0.7755</u>								
	<u>Ø 0.7755</u>								
	<u>Ø 0.7755</u>								
		<u>3745</u>		<u>6815</u>	<u>267</u>	<u>241</u>			
		<u>3744</u>		<u>687</u>	<u>268</u>	<u>240</u>			

OBSERVATION:

SIGNATURE RESPONSABLE:

CERTIFICATE OF TEST CERTIFICAT D'ESSAIS

7029-F

Page 01 of 02

Certification Date

CUSTOMER ORDER NUMBER
NUMÉRO DE COMMANDE DU CLIENT

25398

PART NUMBER/NUMÉRO DE PIÈCE

Invoice Number
S307890

SOLD TO:	ACIER ANICA STEEL INC.	SHIP TO:	ACIER ANICA STEEL INC.
VENDU À:	540 AVENUE FIRING BAIE D'URFE PQ H9X 3T2	EXPÉDIÉ À:	540 AVENUE FIRING BAIE D'URFE PQ H9X 3T2

Description: 4140/4142 HR ANN BAR ASTM A322
3/4 RD X 20' R/L
HEAT: M89114

Line Total: 301 LB

ITEM: 506256

Specifications:
ASTM A322 91

ASTM A304 96

CHEMICAL ANALYSIS

C	MN	P	S	SI	CU	NI	CR
0.4	0.84	0.014	0.02	0.27	0.11	0.08	0.97
MO	SN	AL	V	CB	TI	B	CA
0.16	0.008	0.023	0.005	0.002	0.003	0.0	0.0006
ZR	N	CO	ZN	PB			
0.001	0.0	0.006	0.0029	0.0			

RCPT: R505082

MILL: NORTH STAR STEEL

COUNTRY OF ORIGIN : USA

MECHANICAL PROPERTIES

	YLD STR	ULT TEN	%ELONG	%RED IN AREA	HARDNESS BHN
DESCRIPTION					183

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Material did not come in contact with mercury while in our possession. /Par les présentes, nous certifions que le matériel couvert par ce rapport rencontre les spécifications décrites ci-haut.

NIL BROCHU

Nil Brochu

MANAGER, QUALITY ASSURANCE
GERANT DE L'ASSURANCE QUALITÉ

CERTIFICATE OF TEST
CERTIFICAT D'ESSAIS

7029-F

421

Page 02 of 02

Certification Date

CUSTOMER ORDER NUMBER
NUMÉRO DE COMMANDE DU CLIENT

25398

PART NUMBER/NUMÉRO DE PIÈCE

Invoice Number
S307890

SOLD TO: ACIER ANICA STEEL INC.
VENDU À: 540 AVENUE FIRING
BAIE D'URFE PQ H9X 3T2

SHIP TO:
EXPÉDIÉ À:

ACIER ANICA STEEL INC.
540 AVENUE FIRING
BAIE D'URFE PQ H9X 3T2

Description: 4140/4142 HR ANN BAR ASTM A322
3/4 RD X 20' R/L

Line Total: 301 LB

HEAT: M89114 ITEM: 506256
END-QUENCH HARDENABILITY (JOMINY - RC) IN

1	2	3	4	5	6	7	8	9	10	12	14	16	18	20
56	56	56	56	56	54	54	52	50	49	46	45	42	41	40
24	28	32												
38	36	34												

MAIN SIZE : 5 - 8

VACUUM DEGASSED

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Material did not come in contact with mercury while in our possession. /Par les présentes, nous certifions que le matériel n'a pas été en contact avec le mercure pendant sa possession.

NIL BROCHU

Nil Brochu

MANAGER, QUALITY ASSURANCE
GÉRANT DE L'ASSURANCE QUALITÉ

METCOR INC.

560 BOUL. ARTHUR-SAUVÉ, ST-EUSTACHE, QC, J7R 5A8

Tél.: 450-473-1884

Télécopieur / Fax administration: 450-491-5498

Télécopieur / Fax production: 450-491-6454

Certificat de Conformité Certificate of Compliance

BON DE TRAVAIL order	CHARGEMENT load
331139	1

CLIENT / customer 238

P.J. MACHINAGE

1381 ROUTE LA CITÉ DES JEUNES

ST-LAZARRE

QC J7T 2B8

LIVRÉ À / shipped to:

P.J. MACHINAGE

1381 ROUTE LA CITÉ DES JEUNES

ST-LAZARRE

QC J7T 2B8

1

COMMANDE DU CLIENT customer po	CLASSIFICATION PIECE part classification	MATÉRIEL material	MAÎTRE D'OEUVRE prime contractor	PROGRAM
135400	N/A	4140		
SPECIFICATIONS DU PROCÉDÉ processing specifications				
SEL HARDEN				
HARDEN AND TEMPER				
EXIGENCE / requirement	SPECIFICATIONS / specified	TESTS EXÉCUTÉS / performed	RÉSULTATS DE TESTS / results	
HARDNESS	53 - 56 HRC	11 (907)	53 - 54 HRC	
QUANTITÉ quantity	POIDS weight	DESCRIPTION DES PIÈCES parts description		
118	3	PIECES (118) PIECES 1 BOITE DE CARTON		

COMMENTAIRES / comments

APPROUVÉ par / Approved by:

DATE: 2018-10-20

Pierre Piché
Chief Inspector



APPROUVÉ

QUANTITÉ:

62

NOM DE LA PIÈCE:



MACHINAGE

CONTRÔLE DE QUALITÉ

Lock Roller

MATÉRIEL:

PAGE No.:

001

[illegible]

OBSERVATION:

SIGNATURE RESPONSABLE:

CERTIFICATE OF TEST CERTIFICAT D'ESSAIS

7029-H

Page 01 of 02

Certification Date

CUSTOMER ORDER NUMBER
NUMÉRO DE COMMANDE DU CLIENT

25398

Invoice Number
S307890

PART NUMBER/NUMÉRO DE PIÈCE

SOLD TO: ACIER ANICA STEEL INC.
VENDU À: 540 AVENUE FIRING
BAIE D'URFE PQ H9X 3T2

SHIP TO: ACIER ANICA STEEL INC.
EXPÉDIÉ À: 540 AVENUE FIRING
BAIE D'URFE PQ H9X 3T2

Description: 4140/4142 HR ANN BAR ASTM A322
3/4 RD X 20' R/L
HEAT: M89114

Line Total: 301 LB

ITEM: 506256

Specifications:
ASTM A322 91

ASTM A304 96

CHEMICAL ANALYSIS

C	MN	P	S	SI	CU	NI	CR
0.4	0.84	0.014	0.02	0.27	0.11	0.08	0.97
MO	SN	AL	V	CB	TI	B	CA
0.16	0.008	0.023	0.005	0.002	0.003	0.0	0.0006
ZR	N	CO	ZN	PB			
0.001	0.0	0.006	0.0029	0.0			

RCPT: R505082
MILL: NORTH STAR STEEL

COUNTRY OF ORIGIN : USA

MECHANICAL PROPERTIES

DESCRIPTION	YLD STR	ULT TEN	%ELONG	%RED IN AREA	HARDNESS BHN 183
-------------	---------	---------	--------	-----------------	------------------------

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Material did not come in contact with mercury while in our possession. /Par les présentes, nous certifions que le matériel couvert par ce rapport rencontre les spécifications décrites ci-haut.

NIL BROCHU

Nil Brochu
MANAGER, QUALITY ASSURANCE
GERANT DE L'ASSURANCE QUALITÉ

CERTIFICATE OF TEST
CERTIFICAT D'ESSAIS

7029-H

421

Page 02 of 02

Certification Date

CUSTOMER ORDER NUMBER
NUMÉRO DE COMMANDE DU CLIENT

25398

Invoice Number
S307890

PART NUMBER/NUMÉRO DE PIÈCE

SOLD TO: ACIER ANICA STEEL INC.
VENDU À: 540 AVENUE FIRING
BAIE D'URFE PQ H9X 3T2

SHIP TO:
EXPÉDIÉ À:

ACIER ANICA STEEL INC.
540 AVENUE FIRING
BAIE D'URFE PQ H9X 3T2

Description: 4140/4142 HR ANN BAR ASTM A322
3/4 RD X 20' R/L

Line Total: 301 LB

HEAT: M89114 ITEM: 506256
END-QUENCH HARDENABILITY (JOMINY - RC) IN

1	2	3	4	5	6	7	8	9	10	12	14	16	18	20
56	56	56	56	56	54	54	52	50	49	46	45	42	41	40
24	28	32												
38	36	34												

RAIN SIZE :5 - 8

VACUUM DEGASSED

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Material did not come in contact with mercury while in our possession. /Par les présentes, nous certifions que le matériel haut.

NIL BROCHU

Nil Brochu

MANAGER, QUALITY ASSURANCE
GÉRANT DE L'ASSURANCE QUALITÉ

METCOR INC.

560 BOUL. ARTHUR-SAUVÉ, ST-EUSTACHE, QC, J7R 5A8

Tél.: 450-473-1884

Télécopieur / Fax administration: 450-491-5498

Télécopieur / Fax production: 450 491-6454

Certificat de Conformité Certificate of Compliance

BON DE TRAVAIL order	CHARGEMENT load
331139	1

CLIENT / customer 238

P.J. MACHINAGE

1381 ROUTE LA CITÉ DES JEUNES

ST-LAZARRE

QC J7T 2B8

LIVRÉ À / shipped to:

P.J. MACHINAGE

1381 ROUTE LA CITÉ DES JEUNES

ST-LAZARRE

QC J7T 2B8

1

COMMANDE DU CLIENT customer po	CLASSIFICATION PIECE part classification	MATÉRIEL material	MAÎTRE D'OEUVRE prime contractor	PROGRAM
135400	N/A	4140		
SPÉCIFICATIONS DU PROCÉDÉ processing specifications				
SEL HARDEN				
HARDEN AND TEMPER				
EXIGENCE / requirement SPÉCIFICATIONS / specified TESTS EXÉCUTÉS / performed RÉSULTATS DE TESTS / results				
HARDNESS		53 - 58 HRC	11	53 - 54 HRC
(907)				
QUANTITÉ quantity	POIDS weight	DESCRIPTION DES PIÈCES parts description		
118	3	PIECES (118) PIECES		
		1 BOITE DE CARTON		

COMMENTAIRES / comments

APPROUVÉ par / Approved by:

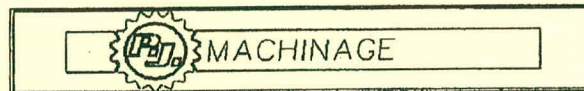
DATE: 2018-10-20

Pierre Piché
Chief Inspector



APPROUVÉ

CLIENT: 628
 JOB No.: 7029-1
 PLAN No.:
 P.O.: P0040952
 QUANTITÉ: 50



DATE: 3-10-18
 FORMAT No.: 001
 PAGE No.: 01

CONTRÔLE DE QUALITÉ

NOM DE LA PIÈCE: C3-3-7 Rev. 4A Link MATÉRIEL: 01

DIMENSIONS DE DESSIN ET TOLERANCE									
PIÈCE No.	.300	.85	.1285						
			+.005						
			-.000						
DIMENSIONS DE LA PIÈCE									
	.300	.849							
	.298	.847							
	.300	.850							
	.300	.850							
	.299	.847	.130						
	.300	.848							
	.297	.850	.130						
	.297	.849	.130						
	.298	.849.5	.130						
	300	849	126	Ø 128					
	301	848	127	128					

OBSERVATION: _____

SIGNATURE RESPONSABLE: Charles Scott

7029-I

Lettre de Conformité / Compliance Letter

O1 FGS & O1 DRILL ROD

Cette lettre certifie que le matériel est d'après la composition chimique comme suit:

This letter is to certify that the material described above meets the following chemistry limits:

Analyse Typique / Typical Analysis

C	Mn	Si	Cr	V	W
0.85/1.05	1.00/1.40	0.15/0.40	0.40/0.60	0.10/0.30	0.40/0.60

MAXIMUM: 229 BHN

Matériel conforme à / Material Compliant to: AISI O1 DIN 1.2510 / UNS T31501 / DEFARS / QQT 570

Pays d'origine: Fabriquer aux États-Unis

Country of origin: Manufactured in USA

Nom Client / Customer Name: ACIER ANICA

Commande No. / Order No.: 61550

Compléter par / Completed by: M SIDDALL

METCOR INC.

560 BOUL. ARTHUR-SAUVÉ, ST-EUSTACHE, QC, J7R 5A8

Tél.: 450-473-1884

Télécopieur / Fax administration: 450-491-5498

Télécopieur / Fax production: 450 491-6454

7029-I

Certificat de Conformité Certificate of Compliance

BON DE TRAVAIL order	CHARGEMENT load
331016	1

CLIENT / customer 236

P.J. MACHINAGE

1381 ROUTE LA CITÉ DES JEUNES

ST-LAZARRE

QC J7T 2B8

LIVRÉ À / shipped to:

P.J. MACHINAGE

1381 ROUTE LA CITÉ DES JEUNES

ST-LAZARRE

QC J7T 2B8

1

COMMANDE DU CLIENT customer po	CLASSIFICATION PIECE part classification	MATÉRIEL material	MAÎTRE D'OEUVRE prime contractor	PROGRAM
135402	N/A	01		

SPÉCIFICATIONS DU PROCÉDÉ processing specifications

SEL HARDEN

HARDEN AND TEMPER

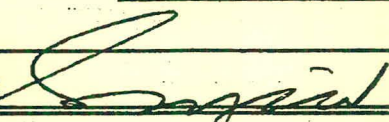
EXIGENCE / requirement	SPÉCIFICATIONS / specified	TESTS EXÉCUTÉS / performed	RÉSULTATS DE TESTS / results
HARDNESS	50 - 55 HRC	5	52 - 54 HRC

QUANTITÉ quantity	POIDS weight	DESCRIPTION DES PIÈCES parts description
52	1	PIECES (52) PIECES 1 SAC DE PAPIER

19/10/18

COMMENTAIRES / comments

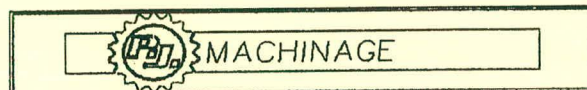
APPROUVÉ par / Approved by:



DATE: 2018-10-19

APPROUVÉ

CLIENT: 628
JOB No.: 7029-J
PLAN No.: PC250-375 Rev. 1A
P.O.: P0040952
QUANTITÉ: 18



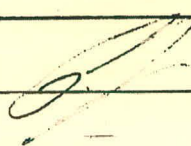
CONTRÔLE DE QUALITÉ

DATE: 31/10/18
FORMAT No.: 001
PAGE No.:

MATÉRIEL: 4140 ANN

DIMENSIONS DE DESSIN ET TOLERANCE									
PIÈCE No.	<u>1.724</u>	<u>262</u>	<u>Ø 1.50</u>	<u>Ø 625</u>	<u>Ø 700</u>	<u>Ø 377</u>			
DIMENSIONS DE LA PIÈCE									
	<u>1.724</u>	<u>262</u>	<u>1.50</u>	<u>625</u>	<u>700</u>	<u>377</u>			
	<u>1.724</u>	<u>262</u>	<u>1.500</u>	<u>6255</u>	<u>700</u>	<u>377</u>			

OBSERVATION: _____

SIGNATURE RESPONSABLE: _____


CERTIFICATE OF TEST CERTIFICAT D'ESSAIS



Earle M. Jorgensen
(Canada) Inc.

Page 01 of 02

Certification Date
17-APR-2018

7029-J

CUSTOMER ORDER NUMBER
NUMÉRO DE COMMANDE DU CLIENT

134657
PART NUMBER/NUMÉRO DE PIÈCE
506264

EARLE M JORGENSEN CAN DIV RMCL
1255, AVE LAPLACE
VILLE DE LAVAL QC H7C 2N6

Invoice Number
S706157

SOLD TO: P.J. MACHINAGE
VENDU À: 9052-9470 QUEBEC INC
1381 ROUTE DE LA CITE DES JEUNES
SAINT- LAZARE QC J7T 2B8

SHIP TO:
EXPÉDIÉ À:

P.J. MACHINAGE
9052-9470 QUEBEC INC.
1381 ROUTE CITE DES JEUNES
SAINT- LAZARE QC J7T 2

Description: 4140/4142 HR ANN BAR ASTM A322
1-3/4 RD X 20' R/L
HEAT: 241800

ITEM: 506264

Line Total: 165 LB

Specifications:

ASTM A322 13
EN 10204 3.1
ASTM E709 15
ASTM E112 13
ASTM A370 17
JDM AO QL-2

ASTM A304 16
ASTM A29 16
ASTM A388 16
ASTM E45 13
AISI 4140/4140H
MIC 6016-16 16

ASTM A388/A388M 16
ASTM A751 14
ASTM A255 14
ASTM E10 15
AISI 4142/4142H
MIC 6016/2016 ADD 5 16

CHEMICAL ANALYSIS

C	MN	SI	P	S	CR	NI	MO
0.411	0.83	0.23	0.017	0.021	1.08	0.14	0.22
AL	CU	SN	TI	B	V	NB	AS
0.02	0.20	0.01	0.0024	0.0001	0.006	0.004	0.005
CA	SB	CO	H				
0.0006	0.001	0.01	0.0008				

RCPT: R433492

COUNTRY OF ORIGIN : ITALY

MECHANICAL PROPERTIES

DESCRIPTION	YLD STR	ULT TEN	%ELONG	%RED IN AREA	HARDNESS BHN 195
-------------	---------	---------	--------	-----------------	------------------------

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Material did not come in contact with mercury while in our possession. /Par les présentes, nous certifions que le matériel couvert par ce rapport rencontre les spécifications décrites ci-haut.

JOANNE DESPRES

MANAGER QUALITY ASSURANCE
GÉRANT DE L'ASSURANCE QUALITÉ

CERTIFICATE OF TEST CERTIFICAT D'ESSAIS



Earle M. Jorgensen
(Canada) Inc.

Page 02 of 02

Certification Date
17-APR-2018

7029-J

CUSTOMER ORDER NUMBER
NUMÉRO DE COMMANDE DU CLIENT

134657

PART NUMBER/NUMÉRO DE PIÈCE

506264

EARLE M JORGENSEN CAN DIV RMCL
1255, AVE LAPLACE
VILLE DE LAVAL QC H7C 2N6

Invoice Number
S706157

SOLD TO: P.J. MACHINAGE
VENDU À: 9052-9470 QUEBEC INC
1381 ROUTE DE LA CITE DES JEUNES
SAINT- LAZARE QC J7T 2B8

SHIP TO:
EXPÉDIÉ À:

P.J. MACHINAGE
9052-9470 QUEBEC INC.
1381 ROUTE CITE DES JEUNES
SAINT- LAZARE QC J7T 2

Description: 4140/4142 HR ANN BAR ASTM A322
1-3/4 RD X 20' R/L

Line Total: 165 LB

HEAT: 241800 ITEM: 506264
END-QUENCH HARDENABILITY (JOMINY - RC) IN

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
58	58	57	57	56	56	55	54	53	52	51	50	48	47	46
16	18	20	22	24	26	28	30	32						
45	43	42	41	40	39	38	37	37						

IDEAL DIAMETER : 5.96 IN GRAIN SIZE : 7 -

CLEANLINESS

	A		B		C		D	
	THIN	THICK	THIN	THICK	THIN	THICK	THIN	THICK
	MAX	MAX	MAX	MAX	MAX	MAX	MAX	MAX
e45	2.0	1.0	0.5	1.0	0.0	0.0	1.0	0.5

VACUUM DEGASSED MATERIAL IS FREE FROM MERCURY CONTAMINATION
NO WELD REPAIR PERFORMED ON MATERIAL
ULTRASONIC: YES
MACRO: OK
MICRO: OK

COMMENTS

red. ratio = 37

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Material did not come in contact with mercury while in our possession./Par les présentes, nous certifions que le matériel couvert par ce rapport rencontre les spécifications décrites ci-haut.

JOANNE DESPRES

MANAGER QUALITY ASSURANCE
GÉRANT DE L'ASSURANCE QUALITÉ

CERTIFICATE OF TEST CERTIFICAT D'ESSAIS

7029-J

Page 01 of 02

CUSTOMER ORDER NUMBER
NUMÉRO DE COMMANDE DU CLIENT

Certification Date

21733
PART NUMBER/NUMÉRO DE PIÈCE
506264

C-133

Invoice Number
S243570

SOLD TO: ACIER ANICA STEEL INC.
VENDU À: 2082 AVE CHARTIER
DORVAL PQ H9P 1H2

SHIP TO:
EXPÉDIÉ À:

ACIER ANICA STEEL INC.
2082 AVENUE CHARTIER
DORVAL PQ H9P 1H2

Description: 4140/4142 HR ANN BAR ASTM A322
1-3/4 RD X 11' 8" / 8' 3"
HEAT: 4909652

ITEM: 506264

Line Total: 165 LB

Specifications:
ASTM A322 91

ASTM A304 96

CHEMICAL ANALYSIS

C	MN	P	S	SI	CU	NI	CR
0.41	0.9	0.014	0.026	0.24	0.17	0.18	0.98
AL	V	N	CB	SN			
0.24	0.025	0.008	0.008	0.002	0.007		

RCPT: R781410

MILL: REPUBLIC TECHNOLOGIES INT'L

COUNTRY OF ORIGIN: USA

MECHANICAL PROPERTIES

DESCRIPTION	YLD STR	ULT TEN	%ELONG	%RED IN AREA	HARDNESS BHN
					179

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Material did not come in contact with mercury while in our possession. /Par les présentes, nous certifions que le matériel couvert par ce rapport rencontre les spécifications décrites ci-haut.

Neil Buchan

MANAGER, QUALITY ASSURANCE
GÉRANT DE L'ASSURANCE QUALITÉ

CERTIFICATE OF TEST CERTIFICAT D'ESSAIS

Page 02 of 02

Certification Date

CUSTOMER ORDER NUMBER
NUMÉRO DE COMMANDE DU CLIENT

21733

PART NUMBER/NUMÉRO DE PIÈCE

506264

Invoice Number
S243570

SOLD TO: ACIER ANICA STEEL INC.
VENDU À:

2082 AVE CHARTIER
DORVAL PQ H9P 1H2

SHIP TO:
EXPÉDIÉ À:

ACIER ANICA STEEL INC.

2082 AVENUE CHARTIER
DORVAL PQ H9P 1H2

Description: 4140/4142 HR ANN BAR ASTM A322
1-3/4 RD X 11' 8" / 8' 3"

HEAT: 4909652

ITEM: 506264

Line Total: 165 LB

END-QUENCH HARDENABILITY (JOMINY - RC) IN

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
55	55	55	55	55	54	54	54	54	53	53	52	52	51	50
16	18	20	22	24	26	28	30	32						
49	47	46	44	43	42	41	40	39						

RAIN SIZE : 7 -

STRAND CAST MATERIAL IS FREE FROM MERCURY CONTAMINATION
NO WELD REPAIR PERFORMED ON MATERIAL

COMMENTS

REDUCTION RATIO 19.0 TO 1
MELT SOURCE: RTI-FRANKLIN
MELT COUNTRY: USA
HOT ROLL SRCE: RTI-LACKAWANNA
HOT ROLL COUNTRY: USA
MELT METHOD: STRAND

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Material did not come in contact with mercury while in our possession. /Par les présentes, nous certifions que le matériel couvert par ce rapport rencontre les spécifications décrites ci-haut.

NIL BROCHU

Nil Brochu

MANAGER, QUALITY ASSURANCE
GÉRANT DE L'ASSURANCE QUALITÉ

METCOR INC.

560 BOUL. ARTHUR-SAUVÉ, ST-EUSTACHE, QC, J7R 5A8

Tél.: 450-473-1884

Télécopieur / Fax administration: 450-491-5498

Télécopieur / Fax production: 450 491-6454

Certificat de Conformité Certificate of Compliance

BON DE TRAVAIL order	CHARGEMENT load
331140	1

7029-J

CLIENT / customer 236

P.J. MACHINAGE

1381 ROUTE LA CITÉ DES JEUNES

ST-LAZARRE

QC J7T 2B8

LIVRÉ À / shipped to:

P.J. MACHINAGE

1381 ROUTE LA CITÉ DES JEUNES

ST-LAZARRE

QC J7T 2B8

1

COMMANDE DU CLIENT customer po	CLASSIFICATION PIECE part classification	MATÉRIEL material	MAÎTRE D'OEUVRE prime contractor	PROGRAM
135401	N/A	4140		

SPÉCIFICATIONS DU PROCÉDÉ processing specifications

SEL HARDEN

HARDEN AND TEMPER

EXIGENCE / requirement	SPÉCIFICATIONS / specified	TESTS EXÉCUTÉS / performed	RÉSULTATS DE TESTS / results
HARDNESS	42 - 46 HRC	11 (907)	45 - 46 HRC

QUANTITÉ quantity	POIDS weight	DESCRIPTION DES PIÈCES parts description
120	36	PIECES (87) PIECES 2 BOITE DE CARTON

COMMENTAIRES / comments

22 OCT

APPROUVÉ par / Approved by:

DATE: 2018-10-20

Pierre Piché
Chief Inspector



APPROUVÉ

QUANTITÉ:

626
729-L
C10-E Rv. 1A
20040952



Trunnich Bushman

MATÉRIEL:

PAGE No.:

37/10/15
001

OBSERVATION:

SIGNATURE RESPONSABLE:



METCOR INC.

560 BOUL. ARTHUR SAUVÉ, ST-EUSTACHE, QC, J7R 5A8

Tél.: 450-473-1884

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Certificat de Conformité

Certificate of Compliance

BON DE TRAVAIL order	CHARGEMENT load
331137	1

CLIENT / customer 238

P.J. MACHINAGE

1381 ROUTE LA CITÉ DES JEUNES

ST-LAZARRE

QC J7T 2B8

LIVRÉ À / shipped to:

P.J. MACHINAGE

1381 ROUTE LA CITÉ DES JEUNES

ST-LAZARRE

QC J7T 2B8

1

COMMANDE DU CLIENT customer po	CLASSIFICATION PIECE part classification	MATÉRIEL material	MAÎTRE D'OEUVRE prime contractor	PROGRAM
135383	N/A	4140		

SPÉCIFICATIONS DU PROCÉDÉ

processing specifications

SEL HARDEN

HARDEN AND TEMPER

EXIGENCE / requirement	SPÉCIFICATIONS / specified	TESTS EXÉCUTÉS / performed	RÉSULTATS DE TESTS / results
HARDNESS	37 - 40 HRC	11 (907)	38 - 40 HRC

QUANTITÉ quantity	POIDS weight	DESCRIPTION DES PIÈCES parts description
123	17	PIECES (123) PIECES 1 BOITE DE CARTON

COMMENTAIRES / comments

2 Oct

APPROUVÉ par / Approved by:

DATE: 2018-10-20

Pierre Piché
Chief Inspector



APPROUVÉ

CERTIFICATE OF TEST CERTIFICAT D'ESSAIS

7029-L

Page 01 of 02

Certification Date

CUSTOMER ORDER NUMBER
NUMÉRO DE COMMANDE DU CLIENT

21733

PART NUMBER/NUMÉRO DE PIÈCE

506264

Invoice Number
S243570

SOLD TO: ACIER ANICA STEEL INC.
VENDU À:

2082 AVE CHARTIER
DORVAL PQ H9P 1H2

SHIP TO:
EXPÉDIÉ À:

ACIER ANICA STEEL INC.

2082 AVENUE CHARTIER
DORVAL PQ H9P 1H2

Description: 4140/4142 HR ANN BAR ASTM A322
1-3/4 RD X 11' 8" / 8' 3"
HEAT: 4909652

ITEM: 506264

Line Total: 165 LB

Specifications:
ASTM A322 91

ASTM A304 96

CHEMICAL ANALYSIS

C	MN	P	S	SI	CU	NI	CR
0.41	0.9	0.014	0.026	0.24	0.17	0.18	0.98
CO	AL	V	N	CB	SN		
0.24	0.025	0.008	0.008	0.002	0.007		

RCPT: R781410

MILL: REPUBLIC TECHNOLOGIES INT'L

COUNTRY OF ORIGIN: USA

MECHANICAL PROPERTIES

DESCRIPTION	YLD STR	ULT TEN	%ELONG	%RED IN AREA	HARDNESS BHN 179
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Neil Bucher

MANAGER, QUALITY ASSURANCE
GERANT DE L'ASSURANCE QUALITÉ

CERTIFICATE OF TEST
CERTIFICAT D'ESSAIS

7029-L

733

Page 02 of 02

Certification Date

CUSTOMER ORDER NUMBER
NUMÉRO DE COMMANDE DU CLIENT

21733

PART NUMBER/NUMÉRO DE PIÈCE

506264

Invoice Number
S243570

SOLD TO: ACIER ANICA STEEL INC.
VENDU À:

2082 AVE CHARTIER
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SHIP TO:
EXPÉDIÉ À:

ACIER ANICA STEEL INC

2082 AVENUE CHARTIER
DORVAL PQ H9P 1H2

Description: 4140/4142 HR ANN BAR ASTM A322
1-3/4 RD X 11' 8" / 8' 3"

Line Total: 165 LB

HEAT: 4909652

ITEM: 506264

END-QUENCH HARDENABILITY (JOMINY - RC) IN

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
55	55	55	55	55	54	54	54	54	53	53	52	52	51	50
16	18	20	22	24	26	28	30	32						
49	47	46	44	43	42	41	40	39						

RAIN SIZE : 7

STRAND CAST MATERIAL IS FREE FROM MERCURY CONTAMINATION
NO WELD REPAIR PERFORMED ON MATERIAL

COMMENTS

REDUCTION RATIO 19.0 TO 1
MELT SOURCE: RTI-FRANKLIN
MELT COUNTRY: USA
HOT ROLL SRCE: RTI-LACKAWANNA
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NIL BROCHU

Nil Brochu

MANAGER, QUALITY ASSURANCE
GÉRANT DE L'ASSURANCE QUALITÉ

